

DESCRIPTIONS OF TWO NEW SPECIES OF THE GENUS *STENUS* LATREILLE (SUBGENUS *HYPOTENUS* REY) FROM CHINA (COLEOPTERA, STAPHYLINIDAE, STENINAE)

ZHAO Cai Yun^{1,2}, ZHOU Hong Zhang^{1*}

1. Institute of Zoology, Chinese Academy of Sciences, 100080 Beijing, China

2. Graduate School of the Chinese Academy of Sciences, 100039 Beijing, China

Abstract Two new species of the genus *Stenus* Latreille (subgenus *Hypostenus* Rey) are described: *Stenus (Hypostenus) oligochaetus* sp. nov. and *S. (Hy.) polychaetus* sp. nov. These two new species are all collected from Yunnan Province, South China. In addition the paper reviews the history of exploration of the Chinese fauna of *Hypostenus*. Some important morphological features like eighth and ninth abdominal sternites of male and the aedeagus are illustrated for the new species. All the type specimens are deposited in the Institute of Zoology, Chinese Academy of Sciences, Beijing.

Key words Steninae, *Stenus*, *Hypostenus*, new species, China.

As a subgenus of the genus *Stenus*, *Hypostenus* Rey, 1884, is a species rich group. This subgenus can be easily distinguished from the other subgenera of *Stenus* by the following characters: abdomen with incomplete paratergites and the 4th segment of metatarsi distinctly bilobed (Cameron, 1930; Lohse, 1964; Rougemont, 1983; Ádám, 1987; Herman, 2001; Puthz, 2001).

So far, 44 species of *Hypostenus* have been described or recorded from China: Aleksandrov (1934) recorded *S. (Hy.) cicindeloides* (Schaller, 1783) from China, which was the first *Hypostenus* species from China. Later, Cameron (1946), Benick (1940, 1942) and Bernhauer (1938) described or recorded 9 species Puthz makes the greatest contribution to the knowledge of Chinese species of this subgenus. He described 16 species and reported the occurrence of another 12 species in China (Puthz, 1968a, 1968b, 1971a, 1971b, 1980, 1981a, 1981b, 1983a, 1983b, 1984a, 1984b, 1991, 1998, 2003). Rougemont (1981, 1984, 1986) recorded 3 species, and Hromádka (1982) described one species from China. Table 1 gives a detailed information on the history of exploration of the Chinese *Hypostenus*. In this paper, we describe two new species from Yunnan Province, South China. Thus, the total number of Chinese species of *Hypostenus* increases to 46. All the type specimens are deposited in the Institute of Zoology,

Chinese Academy of Sciences, Beijing.

These Chinese species of *Hypostenus* are distributed mostly in Oriental region, and of them 34 species are distributed only in that region. Of these Oriental species 20 are endemic to South China, so they constitute the most part of the Chinese *Hypostenus* fauna. Three species occur only in Palaearctic Region (these species are distributed in North China); other species can be found in North and South of China. Thus, this subgenus exhibits the following zoogeographical pattern: most species occur in the south (Oriental region), with the peak of species diversity in South China.

According to the characteristics of body color and some male morphology, Chinese species of *Hypostenus* can be arranged into the following 13 species groups *rufescens* group, *pulcher* group, *cylindricollis* group, *bispinus* group, *piliferus* group, *amoenus* group, *tarsalis* group, *gastralis* group, *cirrus* group, *micuba* group, *nakanei* group, *mercator* group and *cicindeloides* group (Puthz, 1988, 2003; Naomi, 1989, 1990). Naomi (personal communication) suggested most recently that *nakanei* group should be transferred to *rufescens* group based on the study on Japanese species. This change is not concerned in this study.

Specimens were collected by an aspirator or a net and then preserved in 75% alcohol. Specimens are

This study was supported in part by a State Key Basic Research and Development Plan from the Ministry of Science and Technology of China (G2000046800) [National Natural Science Foundation of China (NSFG30570215)] and National Science Fund for Fostering Talents in Basic Research (NSFGJ0030092).

* Corresponding author; E mail: zhoulz@ioz.ac.cn; Fax: 86 10 62565689; Tel.: 86 10 62562794.

Received 18 July 2005, accepted 8 Sep. 2005.

dissected in order to examine eighth and ninth abdominal sternites of male and the aedeagus. Specimens are examined and illustrated under a compound microscope (Leica MZ APO). All

specimens including the types, are deposited in the Institute of Zoology, Chinese Academy of Sciences (IOZ CAS).

Table 1. A brief history of published data on Chinese Hypostenus. The formula + a+ b= c means: + a, the number of new species described; + b, the number of species recorded for the first time from China; c, the total number of Chinese species of Hypostenus known to that time.

| | | | |
|-------|--|-------|------------|
| 1934 | Aleksandrov recorded for the first time the species, <i>aiandeloides</i> | ..... | + 0+ 1= 1 |
| 1938 | Bernhauer described a new species, <i>testaceopiceus</i> | ..... | + 1+ 0= 2 |
| 1940 | Benick described a new species, <i>plagioccephalus</i> , and recorded for the first time the species, <i>oblitus</i> | ..... | + 1+ 1= 4 |
| 1942 | Benick described two new species, <i>lacrimulus</i> , <i>latefasciatus</i> , and recorded for the first time the species, <i>hirtellus</i> , <i>amoenus</i> , <i>mercator</i> | ..... | + 2+ 3= 9 |
| 1946 | Cameron described a new species, <i>yunnanensis</i> | ..... | + 1+ 0= 10 |
| 1968a | Puthz described a new species, <i>shaowuensis</i> | ..... | + 1+ 0= 11 |
| 1968b | Puthz described a new species, <i>similioides</i> | ..... | + 1+ 0= 12 |
| 1971a | Puthz described two new species, <i>changi</i> , <i>takaoensis</i> , which latter synonymized under <i>spurius</i> , and recorded <i>paederinus</i> as subspecies of <i>flavidulus</i> | ..... | + 1+ 2= 15 |
| 1971b | Puthz recorded for the first time the species, <i>sedatus</i> | ..... | + 0+ 1= 16 |
| 1980 | Puthz recorded for the first time the species, <i>currax</i> | ..... | + 0+ 1= 17 |
| 1981a | Puthz recorded for the first time the species, <i>basicornis</i> , <i>piliferus</i> , <i>elegans</i> , <i>tuberculicollis</i> , <i>pulchrior</i> | ..... | + 0+ 5= 22 |
| 1981b | Puthz recorded a new species, <i>hanami</i> | ..... | + 0+ 1= 23 |
| 1981 | Rougemont recorded for the first time the species, <i>verticalis</i> | ..... | + 0+ 1= 24 |
| 1982 | Hromádka described a new species, <i>micuba</i> | ..... | + 1+ 0= 25 |
| 1983a | Puthz described a new species, <i>splenidulus</i> | ..... | + 1+ 0= 26 |
| 1983b | Puthz recorded for the first time the species, <i>thanensis</i> , <i>angusticollis</i> | ..... | + 0+ 2= 28 |
| 1984 | Rougemont recorded for the first time the species, <i>frater</i> | ..... | + 0+ 1= 29 |
| 1984a | Puthz described two new species, <i>comprexicollis</i> , <i>bidenticollis</i> | ..... | + 2+ 0= 31 |
| 1984b | Puthz described a new species, <i>bispinoides</i> | ..... | + 1+ 0= 32 |
| 1986 | Rougemont recorded for the first time the species, <i>loebli</i> | ..... | + 0+ 1= 33 |
| 1991 | Puthz described a new species, <i>sucinigutta</i> | ..... | + 1+ 0= 34 |
| 1993 | Li recorded for the first time the species, <i>bohemicus</i> , <i>rufescens</i> | ..... | + 0+ 2= 36 |
| 1998 | Puthz described a new species, <i>aenonitens</i> | ..... | + 1+ 0= 37 |
| 2003 | Puthz described seven new species, <i>cooterianus</i> , <i>cactiventris</i> , <i>fellowesi</i> , <i>hainanensis</i> , <i>decens</i> , <i>hlavaci</i> , <i>ignobilis</i> | ..... | + 7+ 0= 44 |

**Stenus (Hypostenus) oligochaetus sp. nov.
(Figs. 1-3)**

Holotype ♂, China, Yunnan Province, Mt. Yunlongzhiben (24.8°N, 101.5°E), 20 Apr. 1981, 2430m, WANG Shu Yong collected. Paratype 1 ♂, same data as holotype, collected by LIAO Su Bai.

Body length 4.9 mm. Body black. Antennae and maxillary palpi yellow, leg yellowish brown, clypeus and margin of labrum brown; clypeus and labrum covered with golden yellow hairs.

Head narrower than elytra (ratio: 0.83: 1.00), with an average distance between eyes of 0.50 mm. Interocular area with two shallow longitudinal furrows which converged anteriorly; area between furrows narrower than each of lateral portions and slightly convex. Surface of head covered with coarse punctures, which are larger than basal section of antennal segment III, their interstices smooth, smaller than a half diameter of a puncture. Antennae long,

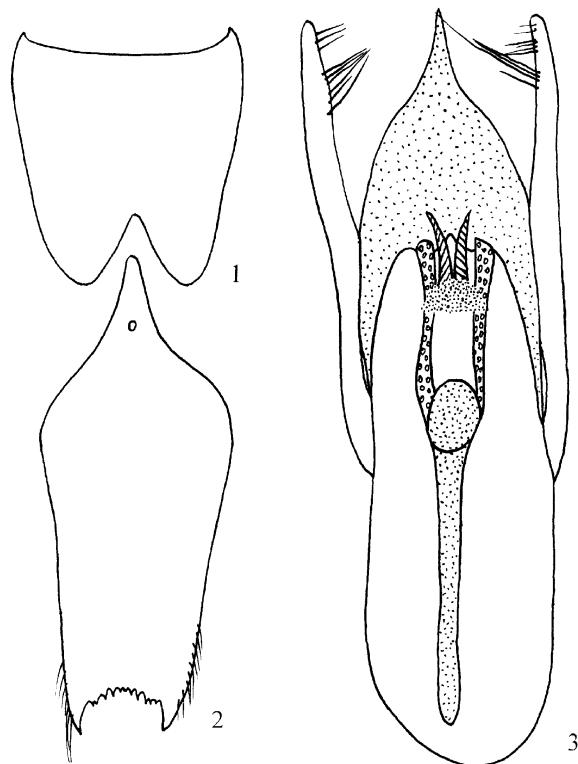
when directed posteriad extend the middle of pronotum but never reach its hind margin. Pronotum distinctly longer than wide (ratio: 1.44: 1.00), widest at posterior 2/5 of its length, sides slightly constricted afterwards; pronotum convex, covered with punctures which are as large as those on head.

Elytra as long as wide (width of elytra: 1.10 mm), slightly longer than pronotum measured along suture (ratio: 1.02: 1.00). Sides inflated, widest at posterior 1/5 of elytral length and slightly constricted after that level; elytra not emarginated on outer part of their hind margin; dorsally convex, with shallow depression along suture; punctures similar to those of head. Elytral surface covered with white pubescence. Hind wings developed.

Abdomen gradually narrowing apicad, with incomplete paratergites, only 3rd segment with paratergites, tergites and stenites of the 4th to 6th abdominal segments completely fused and only with slight trace of suture at base, tergites and stenites of

the 7th to 8th abdominal segments separated only by suture; 3rd-6th tergites with transverse impression at base; punctures on tergites distinct, which on the 3rd tergite smaller than basal section of antennal segment III interstices larger than diameter of a puncture; punctures becoming gradually smaller and sparser towards apex of abdomen; punctures on 7th tergite slightly larger than the size of an inner eye facet, interstices larger than diameter of a puncture. Abdomen covered with white pubescence, which is laterally denser than medially. Legs robust, 3th and 4th tarsomeres of metatarsi bilobed, lobes of the 4th tarsomeres being much longer.

Male. Eighth abdominal sternite with deep notch on hind margin (Fig. 1), ninth abdominal sternite with moderately strong lateral teeth, but without serration on outer margin of the lateral teeth (Fig. 2). Aedeagus (Fig. 3): median lobe slightly longer than parameres, apically with acicular projection; parameres covered with sparse long hairs. Female: unknown.



Figs 1-3. *Stenus (Hypostenus) oligochaetus* sp. nov.

1. Eighth abdominal sternite of male. 2. Ninth abdominal sternite of male. 3. Aedeagus.

Etymology. The species epithet is of Greek origin and refers to sparse setation of the beetle.

Remarks. This new species belongs to *cylindricollis* group based on characters of the ninth

sternite and pronotum. It has no spots on elytra and so it can be distinguished from *S. (Hy.) changi* Puthz (1971a); and *S. (Hy.) changi* with longer parameres and broader apical part of median lobe. The structure of median lobe of the new species is very different from that of *S. (Hy.) plagioccephalus* L. Benick (1940).

***Stenus (Hypostenus) polychaetus* sp. nov.**
(Figs. 4-7)

Holotype ♂, China, Yunnan Province, Menglongbanna (21°9' N, 101°2' E), Mengsong, 26 July 1958, 1600 m, collected by WANG Shu Yong. **Paratypes** 2 ♀ ♀, same data as in holotype; 1 ♀, China, Yunnan Province, Xishuangbanna, Damenglong, 13 July 1958, 650 m, collected by WANG Shu Yong.

Body length: 4.9 mm. Body, except slightly reddish brown pronotum and elytra, black; antennae, maxillary palpi and legs yellow; clypeus and anterior margin of labrum yellowish brown, both covered with golden yellow pubescence.

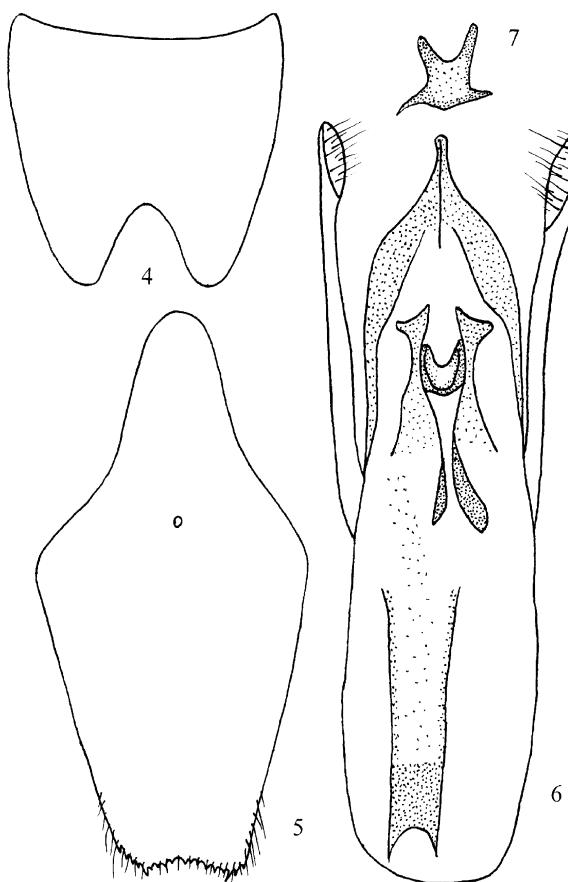
Head narrower than elytra (ratio: 0.82: 1.00), with an average distance between eyes of 0.60 mm. Interocular area with two shallow longitudinal furrows; area between furrows broader than each lateral portion, whose anterior half flat but distinctly convex posteriorly. Punctures on head smaller than basal section of antennal segment III interstices larger than a puncture, smooth. Antenna very long, when extended posteriad, its penultimate segment reaching the hind margin of pronotum, three apical segments of antenna each longer than wide. Pronotum longer than wide (ratio: 1.16: 1.00), widest at posterior 1/3 of its length, sides slightly constricted anteriorly and posteriorly; dorsal surface convex, punctures similar to those on head.

Elytra longer than pronotum measured along suture (ratio: 1.29: 1.00), as wide as long (length of elytra: 1.40 mm); sides inflated, widest at posterior 3/10 of elytral length, and distinctly constricted after that level; not emarginated on the outer part of hind margin. Surface of elytra convex, depression along suture long and deep. Punctures on elytra smaller than basal section of the 3rd antennal segment, interstice larger than diameter of a puncture and smooth.

Abdomen robust, with incomplete paratergites, only 3rd segment with distinct paratergite; tergites and sternites of the 4th to 6th abdominal segments completely fused, with slight trace of suture at base,

tergites and stenites of the 7th to 8th abdominal segments separated only by suture; 3rd-6th tergites with transverse depression at base. Punctures on the 3rd-6th tergites as large as size of an inner eye facet, interstice larger than diameter of a puncture; punctures on 7th tergite smaller than size of an inner eye facet, interstice larger than diameter of a puncture and covered with microsculpture. Abdomen covered with long hairs, which are denser on lateral part than on median. Legs slender, 3rd and 4th tarsomeres of metatarsi bilobed, 4th tarsomeres having much longer lobes.

Male. Eighth sternite of with deep notch on hind margin (Fig. 4), ninth sternite with weak lateral teeth, which are serrate on outer margin (Fig. 5). Aedeagus (Fig. 6-7): median lobe slightly shorter than parameres, apical part of median lobe very narrow and semirounded, inner structure of median lobe very characteristic. Female: spermatheca not sclerotized.



Figs. 4-7. *Stenus (Hypostenus) polychaetus* sp. nov.
4. Eighth abdominal sternite. 5. Ninth abdominal sternite. 6. Aedeagus. 7. Hook of the aedeagus.

Etymology. The species epithet is of Greek origin and refers to dense setation of the beetle.

Remarks. This species belongs to *bispinus* group. It can be distinguished from *S. (Hy.) bidenticollis* Puthz (1984a) and *S. (Hy.) tuberculicollis* Cameron (1930) by the lack of tubercles on pronotum. It is different from *S. (Hy.) compressicollis* Puthz (1984a) in the lack of depressions on pronotum. It is similar to *S. (Hy.) yunnanensis* Cameron (1946), but the punctures of the new species are smaller than those of the latter and new species with special structure of inner sac.

Acknowledgements We are grateful to Dr. Volker Puthz (Limnologische Flussstation, Max Planck Institut für Limnologie, Germany) for sending reprints and offering many kinds of helps, to Dr. Shuri Ichiro Naomi (Natural History Museum and Institute, Chiba, Japan) for sending reprints and reviewing the manuscript, and to Dr. Alexey Yu. Solodovnikov (Field Museum of Natural History, Chicago, USA) for many valuable suggestions to improve this manuscript.

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简隐翅虫亚属两新种记述 (鞘翅目, 隐翅虫科, *Stenus* 简隐翅虫亚属)

赵彩云^{1,2} 周红章¹

1. 中国科学院动物研究所 北京 100080

2. 中国科学院研究生院 北京 100039

摘要 记述虎隐翅虫属 *Stenus* 简隐翅虫亚属 *Hypostenus* 2 新种: *Stenus (Hypostenus) oligochaetus* sp. nov. 和 *S. (Hy.) polychaetus* sp. nov.。新种标本均采自中国云南省。

关键词 鞘翅目, 隐翅虫科, 虎隐翅虫亚科, 新种。

中图分类号 Q969.484.4

本文提供了新种的主要特征图: 雄性第8节和第9节腹板及阳茎。并简要回顾了该亚属中国种类的研究历史。新种模式标本保藏在中国科学院动物研究所标本馆。